

ASYMMETRIC ASSIGNMENT OF SPACE-BORNE COMMUNICATION
SYSTEM RESOURCES

ABSTRACT OF THE DISCLOSURE

The present method for allocating bandwidth in a satellite communication system includes determining an uplink assignment of uplinks to user terminals and a gateway. The uplink assignment is preferably based on input parameters including a gateway uplink efficiency, a user terminal uplink efficiency, and a traffic ratio between the user terminal and the gateway. The method also determines a downlink assignment of downlinks to the user terminals and one or more gateways. The downlink assignment is preferably based on traffic offered to the user terminals and the gateways as dictated by the uplink assignment. Either of the uplink assignment and downlink assignment may be integer or non-integer assignments.